

CLAIMS

We claim:

- 1 1. A massage device, comprising:
 - 2 a handle;
 - 3 a head pivotably coupled to the handle, the head having at least one chamber and at
 - 4 least one massage head adapted to contact a skin surface of a user;
 - 5 at least one impeller positioned in the at least one chamber and capable of rotating
 - 6 relative to the head;
 - 7 at least one fluid conduit having at least one outlet positioned proximate to the
 - 8 impeller for contacting a fluid with the at least one impeller, wherein the fluid causes the
 - 9 impeller to rotate; and
 - 10 at least one oscillation device disposed in the head and coupled to the impeller for
 - 11 moving the head in an oscillatory motion relative to the handle, wherein the at least one
 - 12 oscillation device is substantially shielded from contact by the fluid emitted from the at least
 - 13 one fluid conduit.
- 1 2. The massage device of claim 1, wherein the at least one oscillation device
- 2 comprises at least one gear positioned in the at least one chamber.

1 3. The massage device of claim 2, wherein the at least one gear is positioned in a
2 plane that is generally orthogonal to a longitudinal axis of the massage device.

1 4. The massage device of claim 2, wherein the at least one gear is positioned in a
2 plane that is generally parallel to a longitudinal axis of the massage device.

1 5. The massage device of claim 2, wherein the at least one oscillation device
2 comprises at least one weight coupled to the at least one gear, whereby the at least one
3 weight comprises a center of mass that is capable of moving relative to at least one gear.

1 6. The massage device of claim 5, wherein the at least one weight comprises at
2 least one cavity, the at least one cavity including at least one insert positioned in the cavity,
3 and the insert coupled to the at least one gear at a point offset from an axis of rotation of the
4 at least one gear.

1 7. The massage device of claim 2, further comprising at least one stop on the at
2 least one gear for limiting the rotation of at least one weight.

1 8. The massage device of claim 2, wherein the at least one gear comprises a first
2 gear and a second gear in communication with the at least one impeller through at least one
3 center gear positioned between the first and second gears.

1 9. The massage device of claim 8, wherein the first and second gears each
2 include at least one weight having a center of mass and the center of mass of the first gear is
3 movable relative to the first gear.

1 10. The massage device of claim 9, further comprising at least one stop element
2 extending from the first gear for limiting movement of the at least one weight.

1 11. The massage device of claim 8, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned a first distance from an axis of rotation of the
3 first gear in a first position, and the center of mass of the at least one weight attached to the
4 first gear is positioned at a second distance from an axis of rotation of the first gear in a
5 second position, whereby the first and second distances are not equal.

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2 12. The massage device of claim 9, wherein the center of mass of the at least one
3 weight attached to the first gear is positioned between about 185 degrees and about 200
4 degrees out-of-phase with the at least one weight attached to the second gear.

1 13. The massage device of claim 9, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned in-phase with the at least one weight attached to
3 the second gear.

1 14. The massage device of claim 9, wherein the at least one weight of the first gear
2 is attached to the first gear so that the at least one weight moves relative to the first gear
3 while the at least one weight of the second gear remains substantially motionless relative to
4 the second gear.

1 15. The massage device of claim 1, wherein the at least one oscillation device
2 comprises at least one body rotatably about a shaft, the body including a slot for receiving a
3 first cam and having at least one massage head coupled thereto, and the first cam positioned
4 in the slot and mechanically coupled to the at least one impeller.

1 16. The massage device of claim 15, further comprising a second cam pivotably
2 coupled to the first cam for changing the action of the body depending on the direction of
3 rotation of the at least one impeller.

1 17. The massage device of claim 15, wherein the second cam is positioned relative
2 to the first cam to change between a large oscillation pattern and a small oscillation pattern.

1 18. The massage device of claim 1, wherein the at least one conduit comprises at
2 least one end capable of being releasably attached to a fitting.

1 19. The massage device of claim 1, further comprising at least one valve coupled
2 to the at least one conduit for controlling fluid flowing through the at least one conduit and
3 striking the at least one impeller.

1 20. The massage device of claim 19, wherein the at least one valve is adjustable
2 between an off mode, an open mode allowing fluid to flow through a first outlet, and an open
3 mode allowing fluid to flow through a second outlet, and further comprising at least one
4 conduit coupled to the first outlet and having at least one end positioned proximate to the at
5 least one impeller to expel a fluid to rotate the impeller in a first direction and comprising at
6 least one conduit coupled to the second outlet and having at least one end positioned
7 proximate to the at least one impeller to expel a fluid to rotate the impeller in a second
8 direction that is generally opposite to the first direction.

1 21. The massage device of claim 20, wherein the at least one impeller comprises a
2 first portion having a first diameter and a second portion having a second diameter that is
3 greater than the first diameter, and wherein the at least one end of the at least one conduit
4 coupled to the first outlet is positioned to expel a fluid from the end to rotate the at least one
5 impeller in the first direction, and the at least one end of the at least one conduit coupled to
6 the second outlet is positioned to expel a fluid from the end to rotate the at least one impeller
7 in the second direction.

1 22. The massage device of claim 1, further comprising at least one rotation
2 limiting device for limiting a range of rotation of the head relative to the handle.

1 23. The massage device of claim 22, wherein the at least one rotation limiting
2 device comprises at least one spring positioned between the handle and the head.

1 24. The massage device of claim 1, further comprising at least one additive
2 emitting chamber for mixing a fluid with an additive contained in the at least one additive
3 emitting chamber.

1 25. The massage device of claim 24, further comprising at least one valve coupled
2 to at least one conduit for directing fluid into the at least one additive emitting chamber;
3 wherein fluid flow through the valve is adjustable along a continuum between a completely
4 open mode and a completely closed mode.

1 26. The massage device of claim 1, further comprising at least one orifice in the at
2 least one chamber for releasing a fluid from the head to contact a user.

1 27. The massage device of claim 1, wherein the head comprises at least one first
2 chamber containing the at least one impeller and at least one second chamber containing the
3 at least one oscillation device.

1 28. The massage device of claim 27, wherein the at least one oscillation device is
2 positioned in the second chamber, and further comprising a fluid barrier isolating the at least
3 one oscillation device from the at least one chamber and wherein the fluid barrier
4 substantially prevents the fluid from contacting the at least one oscillation device.

1 29. The massage device of claim 27, further comprising at least one drain
2 positioned in the at least one first chamber for draining fluids.

1 30. The massage device of claim 27, further comprising at least one drain
2 positioned in the at least one second chamber for draining fluids.

1 31. A massage device, comprising:
2 a handle;
3 a head pivotably coupled to the handle, the head having at least one chamber and at
4 least one massage head adapted to contact a skin surface of a user;
5 at least one water driven drive means for rotating at least one oscillation means; and
6 the least one oscillation means for moving the head in an oscillatory motion relative
7 to the handle and for imparting an oscillatory force to the at least one massage head for
8 contacting a user, wherein the at least one oscillation means is disposed in the head and is
9 substantially shielded from contact by a fluid emitted to drive the at least one water driven
10 drive means.

1 32. The massage device of claim 31, wherein the at least one oscillation means
2 comprises at least one gear positioned in the at least one chamber.

1 33. The massage device of claim 32, wherein the at least one gear is positioned in
2 a plane that is generally orthogonal to a longitudinal axis of the massage device.

1 34. The massage device of claim 32, wherein the at least one gear is positioned in
2 a plane that is generally parallel to a longitudinal axis of the massage device.

1 35. The massage device of claim 32, wherein the at least one oscillation means
2 comprises at least one weight coupled to the at least one gear, whereby the at least one
3 weight comprises a center of mass that is capable of moving relative to at least one gear.

1 36. The massage device of claim 35, wherein the at least one weight comprises at
2 least one cavity, the at least one cavity including at least one insert positioned in the cavity,
3 and the insert coupled to the at least one gear at a point offset from an axis of rotation of the
4 at least one gear.

1 37. The massage device of claim 32, further comprising at least one stop on the at
2 least one gear for limiting the rotation of the at least one weight.

1 38. The massage device of claim 32, wherein the at least one gear comprises a first
2 gear and a second gear in communication with the at least one water driven drive means
3 through at least one center gear positioned between the first and second gears.

1 39. The massage device of claim 38, wherein the first and second gears each
2 include at least one weight having a center of mass and the center of mass of the first gear is
3 movable relative to the first gear.

1 40. The massage device of claim 39, further comprising at least one stop element
2 extending from the first gear for limiting movement of the at least one weight.

1 41. The massage device of claim 38, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned a first distance from an axis of rotation of the
3 first gear in a first position, and the center of mass of the at least one weight attached to the
4 first gear is positioned at a second distance from an axis of rotation of the first gear in a
5 second position, whereby the first and second distances are not equal.

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2 42. The massage device of claim 39, wherein the center of mass of the at least one
3 weight attached to the first gear is positioned between about 185 degrees and about 200
4 degrees out-of-phase with the at least one weight attached to the second gear.

1 43. The massage device of claim 39, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned in-phase with the at least one weight attached to
3 the second gear.

1 44. The massage device of claim 39, wherein the at least one weight of the first
2 gear is attached to the first gear so that the at least one weight moves relative to the first gear
3 while the at least one weight of the second gear remains substantially motionless relative to
4 the second gear.

1 45. The massage device of claim 31, wherein the at least one oscillation device
2 comprises at least one body rotatably about a shaft, the body including a slot for receiving a
3 first cam and having at least one massage head coupled thereto, and the first cam positioned
4 in the slot and mechanically coupled to the at least one water driven drive means.

1 46. The massage device of claim 45, further comprising a second cam pivotably
2 coupled to the first cam for changing the action of the body depending on the direction of
3 rotation of the at least one water driven drive means.

1 47. The massage device of claim 45, wherein the second cam is positioned relative
2 to the first cam to change between a large oscillation pattern and a small oscillation pattern.

1 48. The massage device of claim 31, wherein the at least one water driven drive
2 means is at least one impeller.

1 49. The massage device of claim 48, further comprising at least one valve coupled
2 to at least one conduit for controlling fluid flowing through the at least one conduit and
3 striking the at least one impeller.

1 50. The massage device of claim 49, wherein the at least one valve is adjustable
2 between an off mode, an open mode allowing fluid to flow through a first outlet, and an open
3 mode allowing fluid to flow through a second outlet, and further comprising at least one
4 conduit coupled to the first outlet and having at least one end positioned proximate to the at
5 least one impeller to expel a fluid to rotate the impeller in a first direction and comprising at
6 least one conduit coupled to the second outlet and having at least one end positioned
7 proximate to the at least one impeller to expel a fluid to rotate the impeller in a second
8 direction that is generally opposite to the first direction.

1 51. The massage device of claim 50, wherein the at least one impeller comprises a
2 first portion having a first diameter and a second portion having a second diameter that is
3 greater than the first diameter, and wherein the at least one end of the at least one conduit
4 coupled to the first outlet is positioned to expel a fluid from the end to rotate the at least one
5 impeller in the first direction, and the at least one end of the at least one conduit coupled to

6 the second outlet is positioned to expel a fluid from the end to rotate the at least one impeller
7 in the second direction.

1 52. The massage device of claim 31, further comprising at least one additive
2 emitting means for mixing a fluid with an additive.

1 53. The massage device of claim 52, further comprising at least one valve coupled
2 to at least one conduit for directing fluid into the at least one additive emitting means;
3 wherein fluid flow through the valve is adjustable along a continuum between a completely
4 open mode and a completely closed mode.

1 54. The massage device of claim 31, further comprising at least one orifice in the
2 at least one chamber for releasing a fluid from the head to contact a user.

1 55. The massage device of claim 31, wherein the head comprises at least one first
2 chamber containing the at least one water driven drive means and at least one second
3 chamber containing the at least one oscillation means.

1 56. The massage device of claim 55, wherein the at least one oscillation means is
2 positioned in the second chamber, and further comprising a fluid barrier isolating the at least

3 one oscillation device from the at least one chamber and wherein the fluid barrier
4 substantially prevents the fluid from contacting the at least one oscillation device.

1 57. The massage device of claim 55, further comprising at least one drain
2 positioned in the at least one first chamber for draining fluids.

1 58. The massage device of claim 55, further comprising at least one drain
2 positioned in the at least one second chamber for draining fluids.

1 59. The massage device of claim 55, wherein the head is pivotably coupled to the
2 handle.

1 60. The massage device of claim 59, further comprising at least one rotation
2 limiting device for limiting a range of rotation of the head relative to the handle.

1 61. The massage device of claim 60, wherein the at least one rotation limiting
2 device comprises at least one spring positioned between the handle and the head.

1 62. A method of generating a massaging action, comprising:
2 passing a fluid into a massage device to contact at least one impeller, wherein the
3 massage device includes a head pivotably coupled to the handle, the head having at least one
4 chamber and at least one massage head adapted to contact a skin surface of a user;

5 rotating the at least one impeller positioned in the head, which in turn rotates at least
6 one oscillation device disposed in the head and coupled to the impeller for moving the head
7 in an oscillatory motion relative to the handle, wherein the at least one oscillation device is
8 substantially shielded from contact by the fluid emitted from the at least one fluid conduit;
9 oscillating the head and the at least one massage head coupled to the head relative to
10 the handle;
11 contacting the at least one oscillating massage head with a skin surface of a user;
12 exhausting at least a portion of the fluid from the massage device proximate to the at
13 least one massage head; and
14 enabling the fluid exhausted from the massage device to contact the skin surface of
15 the user.

1 63. The method of claim 62, wherein passing a fluid into a massage device to
2 contact one or more impellers further comprises receiving the flowing fluid from a shower
3 head fitting in a shower.

1 64. The method of claim 62, wherein the fluid exhausted from the massage device
2 is greater than about 75 degrees Fahrenheit.